Nursing Practice

Guidance in brief
Infection prevention

New guidance has been issued on the most appropriate procedures to follow when decontaminating breast milk collection kits and related infant feeding equipment.

Decontaminating breast pump kits: new guidance

**In this article...**
- An outline of various decontamination procedures
- Decontaminating equipment for babies at high risk of infection
- Key recommendations for home and hospital decontamination

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Various methods can be used to decontaminate breast pump milk collection kits and items related to infant feeding but they have some drawbacks and risks. In 2015, the Joint Working Group of the Healthcare Infection Society and Infection Prevention Society published guidance to support the safe decontamination of this equipment at home and in hospital. This article summarises its recommendations for health professionals to use and communicate to other groups, such as parents and carers.

Health professionals use a variety of methods to decontaminate breast pump milk collection kits and items related to infant feeding but all have some drawbacks or risks (Gilks et al, 2012; Gilks et al, 2007; Doxtator and Zoutman, 2006). These kits are not classified as medical devices by the Medical Devices Directive 93/42/EEC, and there is no legal requirement for manufacturers to provide detailed instructions on their decontamination. To help address these issues, the Joint Working Group of the Healthcare Infection Society and Infection Prevention Society has developed best-practice guidance for health professionals on the safe cleaning and decontamination of breast pump kits and other infant feeding items, including bottle brushes, breast/ nipple shields and dummies (pacifiers).

Members of the multiprofessional working group involved with producing the guidance included a neonatal nurse, an infection control nurse practitioner, a sterile services adviser, a breast milk bank expert, clinical microbiologists and a clinical scientist. The full guidance (Price et al, 2015) is also targeted at infants’ parents and/or carers via their health professionals.

**Decontamination methods**
The working group considered the following decontamination methods:

- Single-use only – new disposable sterile equipment is provided for every use;
- Washing in warm water with detergent, rinsing thoroughly, drying and storing the equipment dry;
- Washing and rinsing followed by an additional decontamination method;
- Via atmospheric pressure steam produced by heating tap water in a freestanding electrical unit, or inside bags/lidded bowls in a microwave;
- Immersion in hypochlorite-based chemical disinfectants.

**Breast milk pump collection kits**
Kits are usually discarded when no longer required but if they are reused by a different mother, they must be re-sterilised in a sterile services department (SSD); the relevant manufacturer should confirm that SSD steam sterilisation is acceptable for that kit. Before using any decontamination method, the guidance recommends users check with the kit manufacturer that the method is compatible with the equipment.

All places where mothers express milk should have water of good microbiological quality. In the home, water of drinking quality should be used for rinsing.

**5 key points**

1. Various methods to decontaminate breast pump milk collection kits are in use but they have some drawbacks and risks
2. Good hygienic practices are vital when expressing breast milk, including hand washing
3. Each mother should have her own breast pump milk collection kit and never share it
4. Health professionals should give clear instructions on how to decontaminate kits, using illustrated guidance and demonstrations
5. Additional methods to decontaminate equipment may be recommended for infants on neonatal units at high risk of infection

Breast pump milk collection kits must be properly decontaminated before use.
starting. Each mother should have her own breast pump milk collection kit, which should not be shared with other mothers. These kits can be complex—they consist of a number of parts, some of which are quite small and delicate—and must be completely dismantled and decontaminated after every use to help cleaning. Any part that remains wet could be a source of hazardous bacterial growth.

Decontamination is usually carried out by mothers. Health professionals should give clear instructions on how to decontaminate the kits, using demonstrations and illustrated guidance. Before the first use in hospital, the kit should, ideally, be sterile. Any kit that is new but not marked as sterile should be decontaminated according to the manufacturer’s instructions before the first use at home and in hospital. At a minimum, this should be washed with detergent, thoroughly rinsed and dried, then stored dry.

**Same-mother reuse**
The guidance recommends kits are:

- Washed with detergent in warm water;
- Rinsed thoroughly in running water;
- Dried thoroughly;
- Stored dry.

In hospital, dishwashing machines are not often used for washing breast pump milk collection kits. The use of a unit-based dishwashing machine should be approved for individual mothers by the local infection prevention control team (IPCT). These machines should be regularly maintained.

Decontamination methods in addition to the wash, rinse and dry process may be needed for items for infants on neonatal units (NNUs), who are highly susceptible to infection. These extra procedures may also be necessary where parents or carers may not be practising the basic decontamination procedures.

The use of additional methods if indicated by risk assessments should be in accordance with the policies formulated by departmental clinicians and the IPCT. They should also advise on decontamination methods to be used in the home for an infant in an NNU, whose mother is expressing her milk at home.

The joint working group believes that atmospheric pressure steam methods are quick and convenient to use. In hospital, freestanding electrical units or microwavable bowls may be used by more than one mother; this runs the risk of parts of kits belonging to different mothers being interchanged. If these units are used communally, individual kits should be identified to a particular mother and processed separately each time. Water should be completely emptied out of the unit or bowl after each use.

Chemical disinfection has lower quality assurance compared with heat disinfection. Where disinfection of kits and associated items is necessary, it is recommended that heat disinfection is the best method. In hospital, chemical disinfection should only be used if the local IPCT has approved the method and assured the quality of its use.

**Other feeding equipment**
If used, bottle brushes and breast/nipple shields should be for use by one mother only. Between uses, they should be decontaminated by the same methods used for breast pump milk collection kits.

**Dummies (pacifiers, soothers or comforters) for NNU infants**
Dummies may be required for some infants on NNUs for non-nutritive sucking. Each dummy should be:

- For the use of one infant only;
- Securely and individually packed;
- New;
- Ready to use without requiring prior decontamination;
- Discarded at least every 24 hours.

When not in use during this time period, dummies that have been used should be covered with fresh paper towels and stored in a clean, dry container. If they become soiled or contaminated with anything other than the infant’s saliva, they should be discarded immediately. There should be no attempt at decontaminating and reusing dummies, either before or during use. Key recommendations are highlighted in Box 1.

**BOX 1. KEY RECOMMENDATIONS**
- Breast pump milk collection kits should not be reused by different mothers unless they have been sterilised in a sterile services department between use.
- When used by the same mother, a detergent wash followed by thorough rinsing and drying after each use gives acceptable decontamination for most circumstances, as long as it is performed correctly.
- Additional decontamination precautions to washing, rinsing and drying may be used if indicated by local risk assessments and on advice from the departmental clinicians and infection prevention and control teams. The microbiological quality of the rinse water is an important consideration, particularly for infants on neonatal units.
- If bottle brushes or breast/nipple shields are used, they should be used by one mother only. Decontamination should follow the processes used for breast pump milk collection kits.
- Dummies (pacifiers, soothers or comforters) for non-nutritive sucking by infants on neonatal units should be for single infant use. Manufacturers should provide them ready to use and individually packaged. They must be discarded at least every 24 hours, or immediately if soiled with anything other than saliva. No attempt should be made to decontaminate the dummies, either before or during use.


**Conclusion**
The new guidance provides clear advice on the decontamination of infant feeding equipment. This is particularly important for babies in NNUs who may be at increased risk of infection. The guidance provides an opportunity for health professionals to give parents clear and consistent advice on the use of infant feeding devices. NT


**References**

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- Treatment for early onset neonatal sepsis
- Bit.ly/NTNeonatalSepsis